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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|--|---|---|
| Applicant's or agent's file reference 543-60.173PCT/AP/gla | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/EP2003/013022 | International filing date (day/month/year) 20 November 2003 (20.11.2003) | Priority date (day/month/year) 09 December 2002 (09.12.2002) |
| International Patent Classification (IPC) or national classification and IPC C03C 27/02 | | |
| Applicant PERKINELMER OPTOELECTRONICS GMBH & CO. KG | | |

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|---|
| <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>9</u> sheets.</p> |
| <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p> |

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|---|---|
| Date of submission of the demand 07 July 2004 (07.07.2004) | Date of completion of this report 21 March 2005 (21.03.2005) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/013022

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-15, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____, as originally filed
 pages 52, 53, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 1-51, filed with the letter of 14 February 2005 (14.02.2005)
- ☒ the drawings:
 pages 1/12-12/12, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/13022

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-51 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-51 | NO |
| Industrial applicability (IA) | Claims | 1-51 | YES |
| | Claims | | NO |

2. Citations and explanations

Reference is made to the following documents:

D1: US-A-3 722 074 (KLOMP J) 27 March 1973

D2: GB-A-2 208 620 (FERRANTI INT SIGNAL) 12 April
1989

1 Novelty

Document D1 describes a composite body which is made of glass and comprises a mechanical joint made of aluminium. Lamps are mentioned as one area of application (last paragraph of the description). There is no particular mention, however, of flash lamps. The newly submitted claims together with the letter of 14 February 2004 are considered novel over D1.

The subject matter of claims 1 to 51 thus meets the requirements of PCT Article 33(2).

Inventive step

The following should be noted regarding the inventive step involved in the production method

(claims 35 to 51) and the products thereby obtained (claims 1 to 34):

Document D1 describes a method for producing a mechanical joint between glass and aluminium. The table indicates a temperature of 620°C. The melting point of aluminium is 660°C.

The difference between D1 and the present application is the higher composite temperature.

The problem solved by the present application is that of improving the thermal shock resistance of the glass-aluminium composite. According to the invention, the aluminium reacts with the components in the glass. Oxide formation and diffusion improves the reliability of the composite (see page 5, lines 12 to 25 of the application). However, oxide formation and diffusion for the same purpose is also described in D2 (example 1, page 4, line 35 to page 5, line 2).

Document D2 thus describes the same advantages as the present application in relation to the composite temperature feature. A person skilled in the art would therefore consider the inclusion of this feature in the method described in D1 to be a routine measure for solving the problem of interest.

The "flash lamp" feature in independent claims 1 and 35 can be considered novel, but does not contribute to inventive step, since gas-filled tubes are disclosed in D1 and therefore flash lamps are suggested. Dependent claims 6 to 13, 16, 19 and 20 can be considered novel, but do not contribute to

inventive step. Moreover, the features of those claims are known to a person skilled in the art from the manufacture of lamps.

Consequently, claims 1 to 51 of the present application cannot be considered inventive (PCT Article 33(3)).